

CLAIMS

1. An artificial lens for ameliorating undesired effects of an ophthalmological procedure performed on the eye of a subject, comprising:

a generally circular lens body having an anterior surface and a posterior surface
5 for engaging the subject's eye, said lens having a substantially clear center area for positioning over a pupil of the eye and an adjacent light restricting area surrounding the substantially clear center area, said light restricting area disposed to impinge upon and restrict the light that enters the pupil of the eye through the substantially clear area.

2. The artificial lens of claim 1 further comprising a peripheral, substantially
10 clear area surrounding the light restricting area.

3. The artificial lens of claim 1 wherein the light restricting area is substantially darker in color than the substantially clear center area.

4. The artificial lens of claim 3 wherein the light restricting area is black in color.

5. The artificial lens of claim 1 wherein the substantially clear area is
15 approximately 2 mm to approximately 4 mm in diameter.

6. The artificial lens of claim 1 wherein the light restricting area is approximately 8 mm in diameter.

7. The artificial lens of claim 1 wherein the light restricting area is
20 approximately 13 mm to approximately 15 mm in diameter.

8. The artificial lens of claim 1 having plano power.

9. The artificial lens of claim 1 having corrective power.

10. An artificial lens for limiting the amount of light that enters an eye through the pupil of the eye comprising:

a generally circular lens body having an anterior surface and a posterior surface for engaging the surface the subject's eye, said lens having a substantially clear center zone for positioning over the pupil of the eye and an adjacent light restricting zone surrounding the substantially clear center zone, said light restricting zone disposed to impinge upon and limit light that enters the pupil of the eye through the substantially clear area.

11. The artificial lens of claim 10 formed from an artificial lens material selected from the group of materials comprising acrylic, hemaphylic and silicone.

12. A method of restricting the amount of light that enters the pupil of the eye of a subject in need of such light restriction comprising:

placing an artificial lens over the pupil of the subjects eye, said artificial lens having a generally circular lens body with an anterior surface and a posterior surface for engaging the surface the subject's eye, said lens having a substantially clear center zone and an adjacent light restricting zone surrounding the substantially clear center zone,;

positioning said clear center zone over the pupil of the eye whereby said clear center zone allows light to enter the pupil while said light restricting zone impinges upon and limits the light that enters the pupil of the eye through the substantially clear area.

13. The method of claim 12 wherein the subject is in need of such light restriction as a result of an ophthalmologic procedure.

14. The method of claim 12 wherein the subject is in need of such light restriction as a result of a trauma to the subjects eye.

15. The method of claim 12 wherein said ophthalmologic procedure is dilation of the pupil of the eye.

16. An artificial lens for ameliorating undesired effects of an ophthalmological procedure performed on the eye of a subject, comprising:

5 a substantially circular lens body having an anterior surface and a posterior surface for engaging the eye;

said posterior surface further comprising a relatively flat center area for positioning over the pupil of the eye, a second area adjacent said relatively flat center area having a radius of curvature the same as or less than that of the relatively flat center
10 area whereby said posterior surface of the lens conforms to the shape of the cornea of an eye which has been altered by the ophthalmological procedure.

17. The artificial lens of claim 16 further comprising an area peripherally adjacent to said second area having a radius of curvature substantially greater than the radius of curvature of said second area.

15 18. The artificial lens of claim 16 wherein said anterior surface and posterior surface provide appropriate light refraction to the eye.

19. The artificial lens of claim 16 wherein said relatively flat center area has a radius of curvature of approximately 9.2 mm to approximately 10.5 mm.

20 20. The artificial lens of claim 16 wherein said second area has a radius of curvature of approximately 9.2 mm to approximately 10.5 mm or less than 9.2 mm.

21. The artificial lens of claim 17 wherein said area peripherally adjacent to said second area has a radius of curvature of approximately 11 mm to approximately 14 mm.

22. An artificial lens for normalizing the refraction of a relatively flattened cornea comprising:

a lens body having an anterior curvature of an appropriate corrective power and a posterior curvature, said posterior curvature being determined by the shape of the cornea and including a relatively flat center area disposed to conform to the flattened cornea, a second area peripherally adjacent the flat center area, said second area having a radius of curvature the same as or less than a radius of curvature of the first area.

23. The artificial lens of claim 22 further comprising a third area peripherally adjacent said second area, said third area having a radius of curvature substantially greater than the radius of curvature of said second area.

24. The artificial lens of claim 22 wherein said center area and said second area are present as discrete zones.

25. The artificial lens of claim 23 wherein said center area, said second area and said third area are present as discrete zones.

26. The artificial lens of claim 22 wherein said center area, said second area and said third area are provided in discrete zones.

27. The artificial lens of claim 22 having an aspheric design.

28. An artificial lens for normalizing the refraction of a relatively flattened cornea comprising:

a lens body having a anterior curvature of an appropriate corrective power and a posterior curvature, said posterior curvature being determined by the shape of the cornea and including a relatively flat center area disposed to conform to the flattened cornea, a second area peripherally adjacent the flat center area, said second area having a radius of

curvature the same as or less than a radius of curvature of the first area, and a third area peripherally adjacent said second area, said third area having a radius of curvature substantially greater than the radius of curvature of said second area.

29. A method of correcting vision in an eye of a subject in need of such vision
5 correction as a result of the eye of the subject having a relatively flattened cornea, comprising:

determining an appropriate refractive power of an artificial lens required to correct the vision;

determining a shape of the cornea;

10 applying a corrective lens to the eye of the subject, said lens comprising a lens body having an anterior curvature of the appropriate corrective power and a posterior curvature, said posterior curvature being determined by the shape of the cornea and including a relatively flat center area disposed to conform to the flattened cornea and a second area peripherally adjacent the flat center area, said second area having a radius of
15 curvature the same as or less than a radius of curvature of the first area.

30. The artificial lens of claim 29 further comprising a third area peripherally adjacent said second area, said third area having a radius of curvature substantially greater than the radius of curvature of said second area.

31. An artificial lens for ameliorating an undesirable effect of dilation of the
20 pupil of an eye of a subject resulting from light passing through the dilated pupil comprising:

a lens body having a generally clear central area for positioning over the pupil of the eye and means for restricting the light passing through the dilated pupil.

